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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/599,812

06/05/2007

Hartmut Henkel

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4992

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7590

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EXAMINER

AMRANY, ADI

ART UNIT

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2836

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/599,812		HENKEL ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	ADI AMRANY		2836	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 January 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/17/08</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed January 21, 2009 have been fully considered but they are not persuasive.

Regarding Nagai, it is unclear why applicants have focused on the diode (44) of the DC/DC converter (Remarks, page 10). Claim 1 recites that a first controllable switching device connects the standby power source to the output. As can be seen in figure 1, the DC/DC converter (40) is between the battery (34) and the output (32). Claim 1 then recites that "the first controllable switching device has a power transistor which can be rapidly switched." Nagai clearly shows that the DC/DC converter has a power transistor (fig 5, item 42). The purpose of this transistor is to be pulse width modulated (i.e. rapidly switched). Applicants' remarks regarding the diode and the purported purpose of the transistor (to prevent reverse current flow) are directed towards unclaimed subject matter.

Regarding Eng (Remarks, bottom of page 10), nowhere in claim 1 does it require a diode to be placed in parallel with a transistor. Claims 1, 7 or 12 do not distinguish the recited switching device from "a Darlington connected power switch". As stated in the art rejection of the claim, the device for decoupling is transistor 403, not transistor 453. As can be seen in figure 4, transistor 453 is in parallel with at least one diode, as required by claims 6 and 12.

The objection to claim 12 and the §112(2) rejection of claim 10 are withdrawn.

The art rejections of the claims are maintained.

***Claim Objections***

2. Claim 6 is objected to because consistent terminology must be maintained throughout the claims when referring to the same components. The limitation of “decoupling device” in claim 6 should be rewritten as “a device for decoupling,” as recited in claim 1. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Nagai (US 6,057,609).

Nagai discloses a device for supply uninterruptible power (fig 4; col. 5-6) comprising: input connections (nodes a, d) for connection to a primary DC voltage supply device (38; col. 5, lines 46-51); connections for a standby power source (34; col. 5, lines 52-60); output connections (32; col. 6, lines 16-25) ; a device for decoupling the input connections from the first output connections in the event of a fault in the primary DC voltage supply device (33; col. 5, lines 61-67); a first controllable switching device (40) for connecting the standby power source to the first output connections in a controlled manner in the event of a fault in the primary DC voltage supply device; and a control device (36; col. 5, line 61 to col. 6, line 12) assigned to the first controllable switching device wherein, the first controllable switching device has a power transistor

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(fig 5, item 42), a monitoring device (50a; col. 6, lines 16-25) is provided for the purpose of monitoring the output current flowing through the power transistor, and the control device is designed to pulse-width-modulate (col. 6, lines 1-12) the power transistor on the basis of the current being monitored in order to limit the current when can be provided by the standby power source (col. 3, lines 61-67).

By pulse-width-modulating the output of the standby power source, Nagai limits the current that is provided, since the PWM only allows the standby power source to discharge intermittently. The Nagai converter connects the battery and the output and "has" a power transistor, as required by the claim.

5. Claims 1, 6-7 and 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Eng (US 4,745,299).

With respect to claim 1, Eng discloses a device for supply uninterruptible power (fig 4; col. 4) comprising: input connections (404) for connection to a primary DC voltage supply device; connections for a standby power source (451); output connections (411-412) ; a device (403) for decoupling the input connections from the first output connections in the event of a fault in the primary DC voltage supply device; a first controllable switching device (453) for connecting the standby power source to the first output connections in a controlled manner in the event of a fault in the primary DC voltage supply device; and a control device (430) assigned to the first controllable switching device wherein, the first controllable switching device has a power transistor (453), a monitoring device (430) is provided for the purpose of monitoring the output current flowing through the power transistor (lines 51-54) the power transistor on the

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basis of the current being monitored in order to limit the current when can be provided by the standby power source (lines 54-58).

With respect to claim 6, Eng discloses a parallel circuit comprising a diode (unlabeled in fig 4) and a second controllable switching device (403) forms the decoupling device, in that the monitoring device (430) is designed to monitor an input voltage (via transformer 406 at nodes 411-412), and in that the control device disconnects the second controllable switching device if the input voltage signals a fault in the primary DC voltage supply device (col. 2, lines 5-7). The diode of the End device for decoupling is connected to the + output node of the line rectifier (404) and is in parallel with the transistor (403).

With respect to claim 7, Eng disclose the second switching device is a power transistor (lines 24-26).

With respect to claims 12-13, Eng discloses the UPS device, as discussed above in the rejections of claim 1 and 6-7.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagai.

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With respect to claim 2, Nagai discloses that in prior art UPS systems, it is common to have a rechargeable battery (col. 2, lines 29-59). At the time of the invention by applicants, it would have been obvious to one skilled in the art to combine the Nagai UPS of figure 4 with the prior art rechargeable UPS, in order to allow the UPS to operate more than once.

With respect to claim 3, Nagai discloses the device (33) and the power transistor (40) are in series.

With respect to claim 4, it would be obvious to one skilled in the art that the Nagai UPS can supply DC output voltage by including another rectifier (38) at the output (32), because the limitation of a DC output is directed towards the end use of the device and it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8 (CCPA 1977). The Nagai rectifier (38) includes a smoothing capacitor (C8) in order to provide a more stable DC voltage, as is well known in the art.

With respect to claim 5, Nagai discloses the charging device (27) is provided between the chargeable standby source and the input connection. Further, it is inherent that a charging device would be located between the only external power source and the rechargeable battery.

8. Claims 8-11 and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eng in view of Stich (US 5,315,533) and Charych (US 4,564,767).

With respect to claim 8, Eng discloses the device for supplying uninterruptible power, as discussed above in the rejection of claim 1. Stich discloses a UPS with a

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plurality of outputs (fig 1, items 40-42; col. 7, lines 4-25). Eng and Stich are analogous because they are from the same field of endeavor, namely UPS systems. At the time of the invention by applicants, it would have been obvious to one skilled in the art to combine the UPS disclosed in Eng with the parallel outputs disclosed in Stich, in order to supply power to more than one load.

Charych discloses a UPS system wherein the output comprises a regulator (fig 1, item 66; col. 4, lines 35-38). Eng, Stich and Charych are analogous because they are from the same field of endeavor, namely UPS systems. At the time of the invention by applicants, it would have been obvious to one skilled in the art to combine the UPS systems disclosed in Eng and Stich with the regulated output disclosed in Charych, in order to supply continuous regulated power to the loads.

With respect to claim 9, Charych discloses an output regulator, but does not expressly disclose the internal components of the regulator. Eng discloses that the first (453) and second (403) switches act as power regulators. At the time of the invention by applicants, it would have been obvious to one skilled in the art to configure the Charych regulator to comprise Eng power transistors, in order to regulate the level of output power.

With respect to claim 10, Charych discloses a "predefined" contact bridge for short-circuiting the current-limited supply output (output of regulator 66) and the third output connection (dc output bus). As discussed above, Stich discloses supplying a plurality of parallel outputs, including a third output connection.



With respect to claim 11, Eng discloses the switching devices are transistors. At the time of the invention by applicants, it would have been obvious to one skilled in the art to substitute a relay for the transistor, since the components are art recognized equivalents.

With respect to claims 14-18, Eng, Stich and Charych disclose the recited UPS device, as discussed above in the rejections of claims 1 and 8-11.

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ADI AMRANY whose telephone number is (571)272-0415. The examiner can normally be reached on Mon-Thurs, from 10am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rexford Barnie can be reached on (571) 272-2800 x36. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AA  
7-20-09

/Stephen W Jackson/  
Primary Examiner, Art Unit 2836